

ENVIRONMENT

The lessons and impact of MV Wakashio two years on

The oil spill of the MV Wakashio in August 2020 was the worst environmental disaster in the history of Mauritius. Two years on, what are the continuing ecological effects of the Wakashio spill, what kind of lessons have been learned and can Mauritius cope with another Wakashio spill?

by Iqbal Ahmed KHAN



Two years ago, the Wakashio spill was the greatest environmental disaster in Mauritius' history.

1 The Wakashio disaster

In August 2020, as Mauritius struggled with the Covid-19 pandemic, it also experienced its worst ecological disaster: the grounding and subsequent oil spill from the MV Wakashio that saw 1,000 tonnes of oil leak into the coastal waters off the South-East of Mauritius. This week, the Media Trust held a seminar on the continuing effects of the spill two years later.

But the Wakashio was also notable for one fact: it was the first-ever spill that saw the leak of very low sulphur fuel oil. "This low sulphur oil was just put on the global marketplace and this oil has some very interesting characteristics when it is spilled," explains Douglas Helton of the US government's National Oceanic and Atmospheric Administration (NOAA). He added that different types of oils behave differently when spilled. Heavy fuel oils such as the 900 tonnes of Venezuelan heavy crude that spilled into the Delaware river in 2004 sunk to the bottom, whereas lighter oils stay near the surface and usually dissipate through evaporation.

In the case of the new fuel that featured in the Wakashio spill, Helton explained that studies in Norway "raised concerns that some of the techniques such as using booms and skimmers are not as effective because this type of oil does not have the same affinity for booms which makes it more difficult to clean up". This can pose a problem given that more than 90 per cent of oceanic oil spills are cleaned up using booms and skimmers and only larger

spills further offshore are dealt with using chemical dispersants and burning. This same point was also addressed back in August 2020 by the UN's International Maritime Organization – the international shipping regulator – when in a statement, it acknowledged that "because this fuel is no new, research has only just been initiated on its fate and behaviour in the environment, particularly over a longer period".

One problem that was evident early on was how local knowledge of oceanic currents off the South East coast of Mauritius, where fishing and sand-mining is common, was not used to help predict where the oil spill was headed. When oil started leaking from the Wakashio on August 6, 2020, the spill initially covered 3.3 square kilometres, by August 11, 2020, it had spread over 27 square kilometres. But unlike other major spills, such as that of the Exxon Valdez in 1988 where the US government turned to fishing fleets and their understanding of the waters there to clean up and help direct the response to the spill, when it came to the Wakashio, local fishermen and seafarers were left out of the loop. "The oil behaved as the currents predicted they would," says Vikash Tatayah, Conservation Director of the Mauritius Wildlife Foundation (MWF), "one has to have a better understanding of the currents, weather patterns and the knowledge of fishermen when it comes to things like knowing where to place booms. It's important to include fishermen because they are often the first ones there".



Government inaction saw civil society and NGOs step in to help the clean-up.

2 The problems in the response

A second lesson is how the government proved to be slow to realize the danger that the Wakashio posed. While Mauritius over the years had invested a lot in capacity-building and been one of the first African states to come up with an oil spill contingency plan in 1990, and had had experiences of smaller incidents in the past such as the grounding of the MV Benita in June 2016 or the collision between two ships, the MSC Katie and the MV Nordsun near Port-Louis in April 2005, when Wakashio happened, the Mauritian government was slow to ask for international assistance as well as mobilizing to deal with the threat.

Although the Wakashio ran aground on July 25, 2020, it was only on August 8 that the US government was approached for help, recalls Helton, pointing out that the NOAA was approached to provide satellite imagery, information on potential impacts on the ecosystem and clean up strategies as well as information on the possible

trajectory of the spread of the spill to the Mauritius Oceanographic Institute. "Part of the reason for the delay was that initially the vessel was reported to be stable, but it later started breaking up. That is when there were requests for international assistance," says Helton.

Testimonies at a subsequent government-appointed court of investigation into the Wakashio spill also highlighted a number of other problems: several government departments were taking decisions simultaneously without much central coordination; the government's National Disaster Risk Reduction and Management Centre (NDRRMC) did not come up with any reports of government action in response to the disaster, with most of the instructions and decisions only transmitted verbally; and the NDRRMC only held its first meeting to look into the Wakashio on August 7 2020, after oil had begun spilling a day earlier, and certainly much later that the grounding of the

Wakashio on July 25. And lastly, when it came to the response to the spill, the Mauritian government was entirely dependent on what it was being told by the salvage team appointed by the Japanese shipping firm that owned the Wakashio. "This was a mistake where the Mauritian government did not have its own people there and no say in what was being done," says Tatayah.

In response to the perceived inaction of the Mauritian government, civil society stepped in. With many NGOs coming up with solutions such as making and laying out booms using human hair. This, however, has not been without its problems either. "With artificial booms you can separate and use the oil again," explains Tatayah, "but with booms made with hair, how do you separate the oil from the hair later on? Many of these booms just ended up in the Mare-Chicose landfill. As an immediate reaction it made sense, but what do you do with these booms later on is where the problem is."

3 The lingering ecological effect



The ecological damage to the ecologically sensitive Ile-Aux-Aigrettes is still to be fully understood.

The Wakashio oil spill also threatened the 26-hectare Ile-Aux-Aigrettes, declared a nature reserve in 1965, and one of the last remaining niches for endemic wildlife in the country. Since then, the MWF has worked extensively on the planting of endemic flora on the island using most ex-sugar industry labourers and preserving endemic bird species such as the Pink Pigeon, the Mauritius Fody and the Olive White-eye, endemic reptiles such as the Telfair's skink and the Guenther's Gecko as well as maintaining a population of Aldabra tortoises to fill in the same ecological niche as two endemic tortoise species that went extinct in the 1840s.

So, when the Wakashio began spilling oil and threatened to overwhelm the fragile ecosystem of Ile-Aux-Aigrettes, conservationists rushed to evacuate some of these plants and animals in case they needed to preserve a breeding population to rewild the island. The MWF, for example, took out 12 olive white-eyes and 6 Mauritian Fodys and put them in an aviary on the mainland in Black River; captive fruit bats and baby albatrosses – the 200-lb adults being too heavy to transport – and chartered a private plane to evacuate 66 endemic reptiles to Jersey zoo where they still remain. "They have started breeding there and will be reintroduced to the island and islets when the conditions are proper," says Tatayah. Fortunately, he adds, the Wakashio oil spill occurred off the South-East coast and not on the northern coast where there are sea birds and islets off the northern coast such as Flat Island, Serpent Island and Round Island are breeding hotspots. "If that happened, that would have meant dealing with hundreds, if not thousands, of affected seabirds," he says.

But two years later, what is the continuing effect of the Wakashio disaster? The first thing is that even though technically cleaning up Ile-Aux-Aigrettes was officially completed on November 23, 2020, that does not mean that

the oil is completely gone from that ecosystem. The islet is a coral formation – much like a sponge when it comes to oil. "Cleaning it too much means more ecological damage, if we clean it until it becomes a smooth surface then it cannot be colonized by organisms such as shellfish," explains Tatayah, "we also trimmed some of the plants that had come into contact with the oil in the water, at that point we had to balance between the ecological damage of too much trimming of these plants and the risks of leaving some of the oil there. If this happened again, we would have to think carefully about how much of the contaminated plant life we should be trimming." Oil also seeped into the network of underground tunnels on the islet.

One way to judge the ecological recovery of Ile-Aux-Aigrettes means monitoring some of its smallest animals. In this case, an endemic cricket – the Makalopobius Aigrettensis – since the longer-term effects of an oil spill first manifest themselves in insect life and then move up the food chain. During the Peck oil spill in 1979, for instance, ecological recovery was measured by looking at the recovery of snails, says Dr. Geoffrey Scott, of the University of South Carolina, "the most vulnerable areas are those where the oil concentrates and stays for a longer duration such as salt marshes and mangroves". In many of the mangroves, traces of the oil from the Wakashio spill can still be seen. "For several months we did not see this cricket until about two weeks ago, but how well it will bounce back we cannot say," posits Tatayah, "we have to monitor changes in reproductive activity of the animals there and in most oil spills it usually takes up to five years to see the full impact."

The Wakashio spill occurred near the ecologically fragile Blue Bay Marine Park where NGOs such as Eco-Sud have been working to maintain coral. "The Blue Bay Marine Park was in a bad state for years even before Wakashio happened," according to Sarvesh Mundil, Project Officer at Eco-

Sud. He outlines that factors such as climate change, ocean acidification, overfishing, cyclones and predation by the crown of thorns starfish had already taken a heavy toll. Just in 2019 an El-Nino event saw a sharp drop in live coral cover in five sites that his NGO monitored in the South East. "It was just 1,000 tonnes of oil but has affected a lot of pristine ecosystems," says Mundil, "we will need to have continuous studies to investigate the longer-term impact of the Wakashio and some of the changes that we will have to look out for are changes in fish assemblages at the coral reef and sea grass plains."

One thing that drove a lot of public anger back in 2020 were images of melon-headed whales and dolphins washing up dead on the Mauritian coast following the spill. So far, the Mauritian government has come up with no official explanation of what caused this, however, one possible explanation is a combination of the spill and the subsequent scuttling of the Wakashio. "There are a number of ways that marine mammals can be affected, the biggest risk is inhaling the oil at the surface when they come up to breathe," says Helton, "in such cases they do not die immediately, but their health gets poorer and die later on. In the case of the Wakashio there was also the scuttling, and we know that marine mammals are sensitive to noise and there is evidence linking stranding of marine mammals with marine military activity and the use of acoustic equipment."

In 2000 for instance, naval exercises near the coast of the Bahamas led to a mass stranding of Cuvier's beaked whales, and the use of acoustic equipment by submarine hunters by the UK navy in 2014-2015 saw more mass strandings of whales. Within the Indian Ocean, exercises by the Indian, French and US navies in 2011 were linked to the 200-250 dolphins washing up dead on the Iranian coast. This was one of the reasons why Greenpeace opposed the scuttling of the Wakashio back in 2020.

4 Where is the report of the court of investigation?

In response to the Wakashio spill, the Mauritian government appointed a court of investigation headed by former Supreme Court judge Abdurrafiek Hamuth to officially look into the circumstances and the response to the Wakashio spill. In a separate trial, the captain of the Wakashio, Indian national Sunil Kumar Nandeshwar, and his

second officer were found guilty of breaking the 2007 Merchant Shipping Act and sentenced in December 2021. However, as soon as the sentence was passed, the captain was allowed to return to his hometown in Bhopal, in India.

That, of course, was before the court of investigation ended its work in February 2022 and submitted its report

to the Mauritian government. That report has still not been made public. "Where is this report?" asks Tatayah, "it's important for two reasons: to situate responsibility for the incident; and secondly, to figure out where the Mauritian government went wrong in its response. We need that document so that we can properly learn the lessons from what happened two years ago."

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